

## Bur. of Consumer Financial Protection

## Pt. 1026, App. M2

this appendix (after rounding described in §1026.7(b)(12)(i)(F)(1)(i)).

(e) *Calculating the total cost estimate for repayment in 36 months.* When calculating the total cost estimate for repayment in 36 months, a card issuer must total the dollar amount of the interest and principal that the consumer would pay if he or she made the estimated monthly payment calculated under paragraph (d) of this appendix each month for 36 months. The total cost estimate for repayment in 36 months shall be considered accurate if it is based on the estimated monthly payment for repayment in 36 months that is calculated in accordance with paragraph (d) of this appendix.

(f) *Calculating the savings estimate for repayment in 36 months.* When calculating the savings estimate for repayment in 36 months, if a card issuer chooses under §1026.7(b)(12)(i) to round the disclosures to the nearest whole dollar when disclosing them on the periodic statement, the card issuer must calculate the savings estimate for repayment in 36 months by subtracting the total cost estimate for repayment in 36 months calculated under paragraph (e) of this appendix (rounded to the nearest whole dollar) from the minimum payment total cost estimate calculated under paragraph (c) of this appendix (rounded to the nearest whole dollar). If a card issuer chooses under §1026.7(b)(12)(i), however, to round the disclosures to the nearest cent when disclosing them on the periodic statement, the card issuer must calculate the savings estimate for repayment in 36 months by subtracting the total cost estimate for repayment in 36 months calculated under paragraph (e) of this appendix (rounded to the nearest cent) from the minimum payment total cost estimate calculated under paragraph (c) of this appendix (rounded to the nearest cent). The savings estimate for repayment in 36 months shall be considered accurate if it is based on the total cost estimate for repayment in 36 months that is calculated in accordance with paragraph (e) of this appendix and the minimum payment total cost estimate calculated under paragraph (c) of this appendix.

### APPENDIX M2 TO PART 1026—SAMPLE CALCULATIONS OF REPAYMENT DISCLOSURES

The following is an example of how to calculate the minimum payment repayment estimate, the minimum payment total cost estimate, the estimated monthly payment for repayment in 36 months, the total cost estimate for repayment in 36 months, and the savings estimate for repayment in 36 months using the guidance in appendix M1 to this part where three annual percentage rates apply (where one of the rates is a promotional APR), the total outstanding balance is \$1000, and the minimum payment for-

mula is 2 percent of the outstanding balance or \$20, whichever is greater. The following calculation is written in SAS code.

```
data one;
/*
Note:
pmt01 = estimated monthly payment to
        repay balance in 36 months sumpmts36 =
        sum of payments for repayment in 36
        months
month = number of months to repay total
        balance if making only minimum pay-
        ments
pmt = minimum monthly payment
fc = monthly finance charge
sumpmts = sum of payments for minimum
        payments
*/
* inputs;
* annual percentage rates; apr1 = 0.0; apr2 =
    0.17; apr3 = 0.21; * insert in ascending
    order;
* outstanding balances; cbal1 = 500; cbal2 =
    250; cbal3 = 250;
* dollar minimum payment; dmin = 20;
* percent minimum payment; pmin = 0.02; *
    (0.02 + perrate);
* promotional rate information;
* last month for promotional rate; expm = 6;
    * = 0 if no promotional rate;
* regular rate; rate = .17; * = 0 if no pro-
    motional rate;
array apr(3); array perrate(3);
days = 365/12; * calculate days in month;
* calculate estimated monthly payment to
    pay off balances in 36 months, and total
    cost of repaying balance in 36 months;
array xperrate(3);
do I = 1 to 3;
xperrate(I) = (apr(I)/365) * days; * calculate
    periodic rate;
end;
if expmgt 0 then xperratela = (expm/36) *
    xperrate1 + (1-(expm/36)) * (rrate/365) *
    days; else xperratela = xperrate1;
tbal = cbal1 + cbal2 + cbal3;
perrate36 = (cbal1 * xperratela + cbal2 *
    xperrate2 + cbal3 * xperrate3)/(cbal1 +
    cbal2 + cbal3);
* months to repay; dmonths = 36;
* initialize counters for sum of payments for
    repayment in 36 months; Sumpmts36 = 0;
pvaf = (1-(1 + perrate36) ** -dmonths)/
    perrate36; * calculate present value of annu-
    ity factor;
pmt01 = round(tbal/pvaf,0.01); * calculate
    monthly payment for designated number
    of months;
sumpmts36 = pmt01 * 36;
* calculate time to repay and total cost of
    making minimum payments each month;
* initialize counter for months, and sum of
    payments;
month = 0;
sumpmts = 0;
do I = 1 to 3;
```

## Pt. 1026, Supp. I

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perrate(I) = (apr(I)/365) * days; * calculate
periodic rate;
end;
put perrate1 = perrate2 = perrate3 =;
eins;
month = month + 1; * increment month
counter;
pmt = round(pmin * tbal,0.01); * calculate
payment as percentage of balance;
if month ge expm and expm ne 0 then
perrate1 = (rrate/365) * days;
if pmtlt dmin then pmt = dmin; * set dollar
minimum payment;
array xxxbal(3); array cbal(3);
do I = 1 to 3;
xxxbal(I) = round(cbal(I) * (1 +
perrate(I)),0.01);
end;
fc = xxxbal1 + xxxbal2 + xxxbal3 - tbal;
if pmtgt (tbal + fc) then do;
do I = 1 to 3;
if cbal(I) gt 0 then pmt = round(cbal(I) * (1 +
perrate(I)),0.01); * set final payment
amount;
end;
end;
if pmt le xxxbal1 then do;
cbal1 = xxxbal1 - pmt;
cbal2 = xxxbal2;
cbal3 = xxxbal3;
end;
if pmtgt xxxbal1 and xxxbal2 gt 0 and pmt le
(xxxbal1 + xxxbal2) then do;
cbal2 = xxxbal2 - (pmt - xxxbal1);
cbal1 = 0;
cbal3 = xxxbal3;
end;
if pmtgt xxxbal2 and xxxbal3 gt 0 then do;
cbal3 = xxxbal3 - (pmt - xxxbal1 -
xxxbal2);
cbal2 = 0;
end;
sumpmts = sumpmts + pmt; * increment sum
of payments;
tbal = cbal1 + cbal2 + cbal3; * calculate new
total balance;
* print month, balance, payment amount,
and finance charge;
put month = tbal = cbal1 = cbal2 = cbal3 =
pmt = fc =;
if tbalgt 0 then go to eins; * go to next month
if balance is greater than zero;
* initialize total cost savings;
savtot = 0;
savtot = round(sumpmts,1)-round
(sumpmts36,1);
* print number of months to repay debt if
minimum payments made, final balance
(zero), total cost if minimum payments
made, estimated monthly payment for
repayment in 36 months, total cost for
repayment in 36 months, and total sav-
ings if repaid in 36 months;
put title = ' ';
put title = 'number of months to repay debt
if minimum payment made, final bal-
ance, total cost if minimum payments

```

## 12 CFR Ch. X (1-1-13 Edition)

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made, estimated monthly payment for
repayment in 36 months, total cost for
repayment in 36 months, and total sav-
ings if repaid in 36 months';
put month = tbal = sumpmts = pmt01 =
sumpmts36 = savtot =;
put title = ' ';
run;

```

### SUPPLEMENT I TO PART 1026—OFFICIAL INTERPRETATIONS

#### INTRODUCTION

1. *Official status.* This commentary is the vehicle by which the Bureau of Consumer Financial Protection issues official interpretations of Regulation Z. Good faith compliance with this commentary affords protection from liability under section 130(f) of the Truth in Lending Act. Section 130(f) (15 U.S.C. 1640) protects creditors from civil liability for any act done or omitted in good faith in conformity with any interpretation issued by a duly authorized official or employee of the Bureau of Consumer Financial Protection.

2. *Procedure for requesting interpretations.* Under appendix C of the regulation, anyone may request an official interpretation. Interpretations that are adopted will be incorporated in this commentary following publication in the FEDERAL REGISTER. No official interpretations are expected to be issued other than by means of this commentary.

3. *Rules of construction.* (a) Lists that appear in the commentary may be exhaustive or illustrative; the appropriate construction should be clear from the context. In most cases, illustrative lists are introduced by phrases such as “including, but not limited to,” “among other things,” “for example,” or “such as.”

(b) Throughout the commentary, reference to “this section” or “this paragraph” means the section or paragraph in the regulation that is the subject of the comment.

4. *Comment designations.* Each comment in the commentary is identified by a number and the regulatory section or paragraph which it interprets. The comments are designated with as much specificity as possible according to the particular regulatory provision addressed. For example, some of the comments to §1026.18(b) are further divided by subparagraph, such as comment 18(b)(1)-1 and comment 18(b)(2)-1. In other cases, comments have more general application and are designated, for example, as comment 18-1 or comment 18(b)-1. This introduction may be cited as comments I-1 through I-4. Comments to the appendices may be cited, for example, as comment app. A-1.